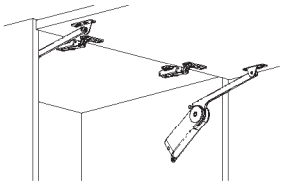
LAMP® HDSN-30 HEAVY-DUTY SOFT-DOWN STAY INSTALLATION MANUAL

PAT.P



Read this manual carefully for proper installation and operation.
Incorrect installation and improper use of the product may cause damage to the unit and also cause injury.
This manual should be kept by the user after installation.

Lapcon mount-on series

Lapcon is an innovative technology developed and designed for ultimate shock absorption and the smoothest opening and closing movement imaginable.

⚠CAUTION Any failure to observe the following cautions may result in personal injury and property damage.

Cautions for installation

- The right-hand and left-hand side bodies of this mechanism should be installed in set.
- This is the mechanism exclusively for a flap type door application. Be reminded that we can not take the responsibility for damages and injuries caused by other applications, disassembly, conversion and the application to the door exceeding the standard ranges shown in the item "Type selection method".
- This mechanism must be installed to the cabinet correctly in accordance with the indications of this manual. Notice that the non-observance of the specified dimensions not only does not enable this mechanism to show its full performance, but also may result in damage and also cause injury.
- It is necessary to use the attached screws for installing this mechanism. Otherwise the disconnection of this mechanism may happen causing injury.
- For improvement the specification may be changed without notice. As for details please verify the actual goods.
- The applicable door must have the construction for which it is difficult to induce bent or torsion.

Cautions for operation

- Keep a door from forced opening and closing. It is prohibited to open a door over a full open angle or to close a door with excess force.
- The working temperature range of this mechanism is 5~35°C. Opening and closing speed of the door depends on the temperature.This is not the symptom of troubles. It is prohibited to use this mechanism at the temperature exceeding the specified range. It is not permitted to apply this mechanism for the cabinet installing a heat-generating microwave oven or other similar appliances.
- Be careful not to insert a finger into the arm mechanism of the unit. Sever injury may be caused.
  It is necessary to periodically check the fixing screws for loosing. Tighten the loosed screws as required.

■Part description

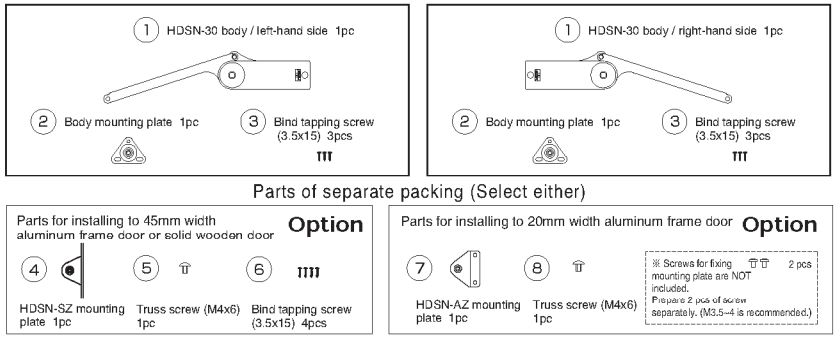

① HDSN-30 body / left-hand side 1pc
② Body mounting plate 1pc
③ Bind tapping screw (3.5x15) 3pcs
① HDSN-30 body / right-hand side 1pc
② Body mounting plate 1pc
③ Bind tapping screw (3.5x15) 3pcs
Parts of separate packing (Select either)
Parts for installing to 45mm width aluminum frame door or solid wooden door
Option
④ HDSN-SZ mounting plate 1pc
⑤ Truss screw (M4x6) 1pc
⑥ Bind tapping screw (3.5x15) 4pcs
Parts for installing to 20mm width aluminum frame door
Option
⑦ HDSN-AZ mounting plate 1pc
⑧ Truss screw (M4x6) 1pc
※ Screws for fixing mounting plate are NOT included. Prepare 2 pcs of screw separately. (M3.5~4 is recommended.) 2 pcs

Fig. 1. Part description

■Type selection method

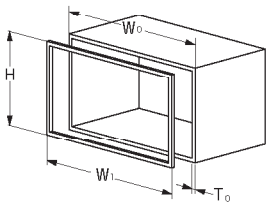


Fig. 2. Cabinet

The slide hinge (overlay use, non-catch type) should be used as a door- hanging device.
The LAMP brand 220 series slide hinge (product No. 220-26/19T, non-catch type) is recommended.

Calculate the door torque according to the following formula considering the weight and the height of the applicable door. Select the suitable type as per Table 1.

Door height (m) /2 x Door weight (kg) x 9.8 – Door torque (N_m)

Table 1. Type and suitable door range

Type	Door torque	
	Opening angle 90°	Opening angle 80°
HDSN-30K	13.7 ~ 17.5 N・m (140 ~ 189 kgf・cm)	13.7 ~ 19.5 N・m (140 ~ 199 kgf・cm)
HDSN-30M	17.6 ~ 21.5 N・m (190 ~ 229 kgf・cm)	19.6 ~ 24.4N・m (200 ~ 249 kgf・cm)
HDSN-30H	21.6 ~ 25.4N・m (230 ~ 269 kgf・cm)	24.5 ~ 29.3N・m (250 ~ 299 kgf・cm)
HDSN-30S	25.5 ~ 29.4 N・m (270 ~ 300 kgf・cm)	29.4 ~ 34.3 N・m (300 ~ 350 kgf・cm)

※ Contact our sales representatives in case of installing to a cabinet exceeding the indicated ranges.

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MOUNTING DIMENSIONS

■The dimensions in case of the 90°opening door are shown in the following figures. The dimensions in case of the 80°opening door are shown in ( ).
This drawing shows the case of installation to 45mm width aluminum frame door or solid wooden door (HDSN-SZ). As for the case of installation to 20mm width aluminum frame door (HDSN-AZ), refer to Fig. 7 and 8.

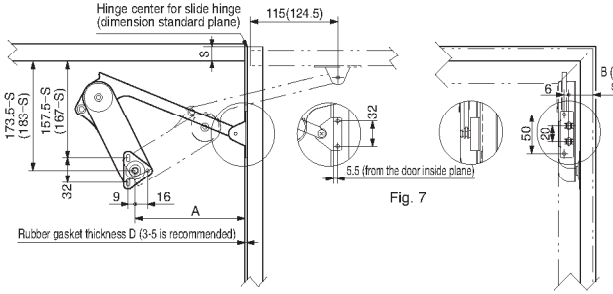

Fig. 3

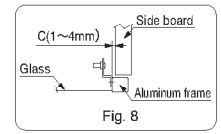

Fig. 8

Fig. 7

■INSTALLATION PROCEDURE

This shows the installation procedure for the application of 45mm width aluminum frame door or solid wooden door (HDSN-SZ).
In case of the installation procedure for the application of 20mm width aluminum frame door (HDSN-AZ), refer to Fig. 9 and 10.

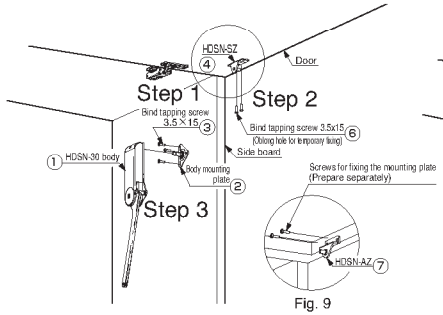

Fig. 4

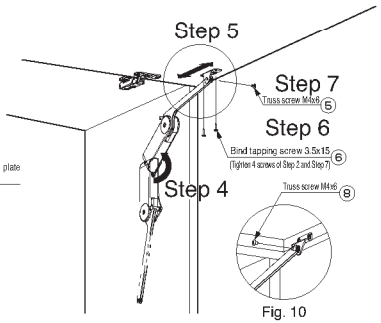
Step 5
Step 7
Truss screw M4x6 ⑤
Step 6
Bind tapping screw 3.5x15 ⑥ (Tighten 4 screws of Step 2 and Step 7)
Step 4
Truss screw M4x6 ⑧

Fig. 5

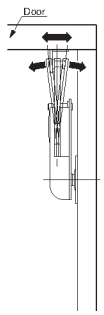

Fig. 6

Fig. 9

Fig. 10

Before installing the unit, mount the slide hinge to the specified position and adjust it so that the door can be opened and closed smoothly.

⚠ The position adjustment of the slide hinge should be carried out before installing the HDSN-SZ or HDSN-AZ mounting plate. Otherwise the stay arm may be deflected right or left as shown in Fig. 6, which may result in trouble or damage.

Step 1. Place the mounting plate ② to the specified position of the inside surface of a cabinet and fix it with the attached bind tapping screws 3.5x15 ③ firmly.

Step 2.

● In case of HDSN-SZ mounting plate (for 45mm width aluminum frame door or solid wooden door)
Temporarily fix the HDSN-SZ mounting plate ④ through its oblong hole to the specified position of the back of the door with the attached bind tapping screws 3.5x15 ⑥.

● In case the HDSN-AZ mounting plate (for 20mm width aluminum frame door)
The fixing screws are not supplied. Prepare them separately (M3.5-4 is recommended).Fix the HDSN-AZ mounting plate ⑦ with the prepared fixing screws firmly. (Fig. 7 and 9)

※ The HDSN-AZ mounting plate ⑦ should be mounted so that the distance (C) between the side board inside surface and the aluminum frame side surface be in the range of 1~4mm. (Fig. 8)

Step 3. Put the hole of the HDSN-30 side body ① to the axis of the body mounting plate ②, insert the unit body up to the root of the plate making click.

⚠ Never use a hammer or others like it in order to insert the mounting plate into the HDSN-30 body ①. Otherwise trouble or damage may happen.

Step 4. Adjusting the axis of the HDSN-SZ mounting plate ④ and the hole in the arm end, insert the truss screw M4x6 ⑥.

Step 5. Check the door opening and closing function and adjust the position of the HDSN-SZ mounting plate ④ through its oblong hole.

Step 6. Remove the arm from the mounting plate. Then, fix the plate firmly with the bind tapping screw ⑥ into its circular hole.

Step 7. Insert the arm into the axis of the mounting plate again and fix the arm firmly with the truss screw M4x6 ⑤. (Fig. 10)

SUGATSUNE

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